

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Rule 71.1)

To:

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Date of mailing
(day/month/year)

08.04.2005 *lw*

Applicant's or agent's file reference
209546-82306 ✓

IMPORTANT NOTIFICATION

International application No.
PCT/US 03/40684 ✓

International filing date (day/month/year)
18.12.2003

Priority date (day/month/year)
27.12.2002

Applicant
INTIER AUTOMOTIVE INC. et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:



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PCT



INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

Applicant's or agent's file reference 209546-82306		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/US 03/40684	International filing date (day/month/year) 18.12.2003	Priority date (day/month/year) 27.12.2002	
International Patent Classification (IPC) or both national classification and IPC B29C37/00			
Applicant INTIER AUTOMOTIVE INC. et al.			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 7 sheets, including this cover sheet.
 - ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 19.07.2004	Date of completion of this report 08.04.2005
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Kujat, C Telephone No. +49 89 2399-2360 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**JC20 Rec'd PCT/PTO 23 JUN 2005
International application No. PCT/US 03/40684**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*

Description, Pages

1, 2, 4-6 as originally filed
3 filed with telefax on 09.08.2004

Claims, Numbers

1-9 filed with telefax on 13.01.2005

Drawings, Sheets

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US 03/40684

5. ☒ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

see separate sheet

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 7,8

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

☒ the claims, or said claims Nos. 7,8 are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the Standard.

☐ the computer readable form has not been furnished or does not comply with the Standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-6,9
Inventive step (IS)	Yes: Claims	
	No: Claims	1-6,9
Industrial applicability (IA)	Yes: Claims	1-6,9
	No: Claims	

2. Citations and explanations

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/US 03/40684**

see separate sheet

Re Item I

Basis of the report

1. The amendments filed under Article 34 introduce subject-matter which extends beyond the content of the application as filed, contrary to Article 34(2)(b) PCT. The amendments concerned are the following:
 - 1.1 Page 3, line 2: "available as a water-based or solvent-based paint"
 - 1.2 Page 3, line 4: "having a thickness in a range between about..."
 - 1.3 Page 3, line 5: "include vinyl, acrylic and polyurethane paints"
 - 1.4 Corresponding claims 1, 7 and 8.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document:

D1: EP-A-0 995 568 (RECTICEL ; LINPAC MOULDING LTD (GB)) 26 April 2000 (2000-04-26)

- 2.1 With regard to independent **claim 1 as filed**, document **D1** discloses a method for manufacturing a work piece by using in-mould coating and melt compression moulding, the method comprising the steps of:
introducing an in-mould coating onto a first mould half of a mould tool (page 6, lines 30 to 35);
introducing a work piece material (page 7, line 33) onto a second mould half of a mould tool (page 7, lines 31 and 32: "partially closed so that an opening of 8 mm remained"), the work piece material having a temperature at or above a temperature at which at least a portion of the work piece material is in a molten state (page 7, line 34);
closing the mould tool (page 7, line 36); and

opening the mould tool and removing the work piece after the work piece material has at least partially cooled (implicit feature of the process disclosed in D1).

- 2.2 Therefore, the subject-matter of claim 1 as filed lacks novelty over the disclosure of document D1. Further, see page 8 (line 31) for the absence of a foam layer between the in-mould coating and the work piece material.
- 2.3 Dependent claims 2 to 6 and 9 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty, the reasons being as follows:
- 2.3.1 The additional features of dependent claim 2 have already been disclosed in document D1 (page 6, line 30: "spray gun").
- 2.3.2 The additional features of dependent claim 3 have already been disclosed in document D1 (page 7, line 33).
- 2.3.3 The additional features of dependent claim 4 have already been disclosed in document D1 (page 7, line 33).
- 2.3.4 The additional features of dependent claim 5 have already been disclosed in document D1 (page 4, line 17).
- 2.3.5 The additional features of dependent claim 6 have already been disclosed in document D1 (page 6, line 28).
- 2.3.6 The additional features of dependent claim 9 have already been disclosed in document D1 (page 7, line 37: "back pressure of 10 bars"; page 5, line 28: "1 to 350 kg/cm²"), since the range of claim 9 equals a range of from 77,5 to 310 kg/cm² when converted into SI-units.
3. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document **D1** is not mentioned in the description, nor is this document identified therein.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/US 03/40684

09-08-2004

Aug-08-04

11:05am

From: Hon. [redacted] Miller, Schwartz, Cohn

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JC20 Rec'd PCT/PTO 23 JUN 2005

The process of the present invention utilizes IMC 19, which is commercially available as a water-based or solvent-based paint. The IMC 19 is sprayed on the surface of the cavity 16 of the upper mold tool 12 with a spray gun 21. The IMC 19 forms the class "A" surface of the work piece 18 having a thickness in a range between about 10-50 μ . Suitable paints include vinyl, acrylic and polyurethane paints. In the illustrated process, the spray gun 21 is an airless gun that utilizes a high pressure, hydraulic system. As the IMC 19 passes through a nozzle 22 of the spray gun 21, the IMC 19 is atomized. However, the process of the present invention may be practiced with other types of spray guns known in the art, including air atomized spray guns. The IMC 19 may be manually or robotically applied.

The IMC 19 is sprayed uniformly across the surface of the cavity 16 of the upper mold tool 16. However, it can be appreciated that the IMC 19 does not have to be uniformly sprayed. A combination of processes can be employed, such as molding a conventional coverstock (not shown) on an upper portion of the work piece 18 while employing the IMC 19 on a second portion of the work piece 18. Alternatively, two tone effects (not shown) can be generated by masking the work piece 18 and spraying two different types of IMC 19 on the work piece 18. Additionally, visual effects, such as "cloud printing" metallics, can be achieved by using the proper IMC 19 or application process, as commonly known in the art.

A mold release (not shown), as commonly known in the art, may be employed in the melt compression mold process. In the present process, the mold release is applied to the surface of the upper mold tool 12 and the lower mold tool 14 to assist in the removal of the work piece 18 at the completion of the melt compression mold process. One example of a mold release that can be applied directly to the upper and lower mold tool 12, 14 is polytetrafluoroethylene, more commonly known by the trade name of TEFLON®. However, the mold release does not have to be applied directly to the upper mold tool 12 and lower mold tool 14. Mold release agents can be formulated into the IMC 19 and sprayed onto the upper mold tool 12 and lower mold tool 14. The application of the mold release depends upon the characteristics of the IMC 19, the material of the work piece 18 and the surface of the upper mold tool 12 and lower mold tool 14.

Once the mold release is applied if desired, and the IMC 19 is sprayed onto the upper mold tool 12, the molding process is initiated. The molten work piece material 17 is extruded with an extruder head 20 by laying a ribbon of molten substrate material 17 into

Claims

What is claimed is:

1. A method for manufacturing a work piece (18) by using in-mold coating and melt compression molding, the method comprising the steps of:

introducing an in-mold coating (19) comprising a water-based or a solvent-based paint onto a first mold half (12) of a mold tool (10);

introducing a work piece material (17) onto a second mold half (12) of the mold tool (10), the work piece material (17) having a temperature at or above a temperature at which at least a portion of the work piece material (17) is in a molten state;

closing the mold tool (10); and

opening the mold tool (10) and removing the work piece (18) after the work piece material (17) has at least partially cooled.

2. A method for manufacturing a work piece according to Claim 1, wherein the in-mold coating (19) is introduced by spraying the in-mold coating (19) onto the first mold half (12).

3. A method for manufacturing a work piece according to Claim 1, wherein the work piece material (17) comprises a thermoplastic resin material.

4. A method for manufacturing a work piece according to Claim 3, wherein the thermoplastic resin material comprises Polypropylene (PP), Acrylnitril-Butadiene-Styrene-Copolymer (ABS), Polycarbonate-Acrylnitril-Butadien-Styrol-Copolymer (PC/ABS), or Thermoplastic Olefin (TPO) material.

5. A method for manufacturing a work piece according to Claim 1, wherein the work piece material (17) includes fillers, reinforcement glass or reinforcement natural fibers.

6. A method for manufacturing a work piece according to Claim 1, further including the step of introducing a mold release onto one of the first or second mold tool halves (12, 14).

7. A method for manufacturing a work piece according to Claim 1, wherein the in-mold coating (19) comprises a polyurethane paint.

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From: Monigman, Miller, Schwart, Cohn

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8. A method for manufacturing a work piece according to Claim 1, wherein the in-mold coating (19) has a thickness in a range between about 1000

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9. A method for manufacturing a work piece according to Claim 1, wherein the mold tool (10) exerts a pressure of approximately 0.5 to 2.0 tons per square inch when closed.

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AMENDED SHEET